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CONTENTS

LETTERS 1

1870 TO 1960 4

DEMOCRACY FOR RURAL INDIA—*M. Ananthasayanam Ayyangar* 5

THE STORY OF BACHAT GRAM 9

ANAB-E-SHAHI—THE ROYAL GRAPE—*B.M. Pansare* .. 10

INDIAN TOBACCO .. 11

DOLLS AND TOYS .. 12

SCIENCE NEWS-LETTER .. 13

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LETTERS

Degrees vs. Field Experience

SIR,

AFTER MORE THAN five years of experience in the C.D. programme as Agriculture Assistant I have come to the conclusion that award of promotion to the field workers is mainly meant for those who have the degree or diploma. Other qualities said to be more important than degree or diploma such as one's experience in the field, success achieved so far etc. are given little weight in considering suitability for promotion.

When only degree or diploma holders are promoted to higher posts, the field workers develop an attitude and interest in increasing their qualification and not in gaining better experience and successful working capacity by way of actual field work. This undesirable interest affects to a considerable extent the achievement of the targets of Community Development programme. After a V.L.W. or similar field worker has entered service his further progress is blocked since being a non-graduate further promotions are denied to him. The majority of the field workers are non-graduates and for the above reason remain disappointed and frustrated.

Unless something is done to remove this cause of disappointment from the field workers, satisfactory results cannot be expected. To increase the efficiency of a worker it is necessary to encourage him by rewarding him as a result of the practical work done by him. In my opinion while considering cases for departmental promotions, the criteria of having a degree or diploma should not be given undue weight but other qualities such as experience, successful working capacity etc. should be kept in view. Moreover suitable arrangement for pursuing studies by the field workers should also be made so that those who are keen may obtain the degree or diploma for improving their career.

In this way most of the disappointed workers will be able to render more useful service to the nation.

23-1-60 — Yours etc.

Pre-Extension Block, — *Shriniwas,*

Sidhi. — *Agri. Extension Officer.*

Wealth from Waste

Sir,

The C.D. Programme has been in existence for the last 8 years. But nowhere the people in the villages have become latrine-minded. So far several systems of latrines have been tried but these have not proved popular anywhere. The result is that the unsocial and unhygienic habit of our villagers easing themselves in the open continues. On the one hand, the night-soil which is a potential rich source of manure goes to waste. And on the other, the crop yields remain low because of lack of good manure.

The bore-hole system of latrine provides a simple and practicable solution to our problems. By having bore-hole latrines for each family, the night-soil can be converted into mature compost manure after 3 or 4 months. This gives two to four bags of manure worth Rs. 100 to Rs. 200 per year. This is a real wealth from waste.

The proposed system will click only if the newly elected village Panchayats undertake the responsibility for installing and maintaining the bore-hole latrines. They may purchase a few earth borers, costing Rs. 145 each and employ one or two persons for working the machines, which may be given to individuals on hire. The latrines may be cleared regularly at intervals, according to schedule. The Panchayats should also maintain some public latrines of the bore-hole type for common use by the public.

Yours etc.
P. Subba Ramiah Setty
20-1-60
Anantpur (Andhra Pradesh)

Community Compost Yard

Sir,

Generally we find in villages that the valuable cattle manure and household sweepings are heaped here and there. The heaps exists generally in a Government-owned land or common land such as a Public roadside or a footpath to a drinking water well or a tank, or a *Gram Chavidi* etc. This practice not only makes the villages look dirty but is highly injurious to health. The ryots in villages are doing so, due to paucity of proper site of their own where manure could be preserved.

It is a very difficult task for an Extension worker to remove the heaps, or to get them covered regularly. To overcome this difficulty, I suggest that one or two acres of land may be reserved as Community Compost Yard. Here, the community as a whole can have their manure pits and preserve the compost manure on scientific lines. It should be the primary duty of the Panchayats to enforce this.

Yours etc.
P. Vasudevamurty,
20-1-60 V.L.W.
Narasannapeta Block,
Srikakulam,
Andhra Pradesh.

Unhealthy Practice

Sir,

The flesh of carcasses are eaten by the *chamars* (chakkilia community). This is a very unhealthy practice and should be stopped. The Government should bring in legislation asking the Municipalities and Panchayat Boards to prohibit the eating of the flesh of carcasses by anybody and to ask the owners of carcasses to hand them over to the veterinary officials concerned, who will arrange to send them to the nearest Carcass Recovery Centres. It may be pointed out that a number of such centres have now been sanctioned by the Khadi and Village Industries Commission which are running under the control of the B.D.Os and certain recognised public Institutions. This would certainly do good to the *chamars,* and at the same time help the Carcass Recovery Centres to carry on their work with facility and thereby double the production of bone meal and flesh meal which are the best organic manures for agricultural purposes.

Yours etc.,
29-1-60 *R. Ramasubbu*
T. Kallupatti P.O.
(Madurai Dt.)

Secret Ballot

Sir,

The present system of election of village Panchayats, particularly the process of voting by show of hands has resulted in the rise of factionalism, casteism, communalism and group rivalry in many villages. Instances are

not wanting when the law and order situation in some villages has deteriorated as an aftermath of such elections. It can be well imagined how difficult it will be for the Panchayats to have the wholehearted cooperation of the villagers. To obviate this difficulty and to maintain harmony among the villagers it is desirable that the voting should be by secret ballot. No doubt this involves expenditure, but it is unavoidable. I understand that the U.P. Government has decided to introduce as a first step, secret ballot in the election of Pradhans of Gaon Sabhas. And when funds permit the same will be extended to the election of up-Pradhans and members of the panchayat. U.P. Government's decision is a wise one and deserves emulation by other State Governments.

28-2-60 Yours etc.
Bareilly (U.P.) *Ram Anand*

Rural Electrification

Sir,

The Rural Electrification Programme of the Government so far has been a halting and half-hearted one. Whereas one can appreciate the slow progress of electrification of the villages due to paucity of funds, Electric equipment and power itself, it is not clear why an invidious distinction is being observed between the rules for supply of power to the villages and cities. For example, the cultivators are subjected to conditions like Minimum Consumption guarantee and they are also required to pay the total charges of taking electricity to the farm in the course of about 8 years and even then the property remains that of the Government. Such conditions thwart increasing use of electricity for agricultural purposes resulting in the slowing down of the food production drive.

A similar and perhaps much worse phenomenon is noticeable in the sphere of village industries as well. It should have been obvious to an impartial observer of our village economy that our village Industries have failed and are dying out because these are inefficient and unremunerative as compared to the large-scale industries. The proper course would have been to improve the instruments and techniques of their production, so that these could become paying. If steps had been taken to introduce improved spinning wheel of the Japanese model, loom and other small-scale industries run by power, things would have been materially different from what they are today. These industries would have come up and stood on their feet. In that case, there would have been no necessity of having to spend crores of rupees on subsidising these dying industries through the Khadi & Village Industries Board. But as it is, the Government have placed certain restrictions on the setting up of a new power-run spinning unit or a power loom or a rice-husking mill. And in this, the group of people thinking on the lines of Khadi and Village Industries Board have their share of responsibility, too. Presumably, in order to safeguard the village industries against the uneven competition from the large scale industries, they have recommended the imposition of certain conditions on the licensing of the above-referred industries. Alas, they knew that in this way, it is only the well-established large-scale industries like the textile industry which are being protected and not the village industries! Things would have been much better only if the villagers had been given a free hand to go ahead with power-run village industries.

16-2-60 Yours etc.
Rohtak *Ranbir Singh*

1870 TO 1960

THE PATTERN of rural self-government in India is in the melting pot. The British Government were able to set up Municipalities and Corporations on a satisfactory basis. But, they had no sympathy with the old institution of village Panchayat. They could not hope to control it and the fact that they were organised on the basis of caste gave them some justification for ignoring them and evolving a system of land revenue administration which brought the individual ryot in the ryotwari areas in direct relation to the revenue authorities. In the zamindari areas, it was to the interest of the zamindars to disrupt the panchayats which acted as a break against their extortions.

Between 1870 and the beginning of this century, District Boards and Taluk Boards were set up in all the provinces; but they were hardly entitled to be called self-governing bodies. They consisted largely of officials and nominated non-officials and were mere appendages to the bureaucratic machine. Their major functions were: Communications, Health and Primary education but their resources were so meagre that they could not do much.

The issue of rural self-government got an impetus when the Montagu-Chelmsford Reforms Act came into force in 1920. It became a transferred subject and the Ministers in charge were anxious to do something. Attempts were made to organise village Panchayats and introduce elections to the District Board but it was found that the resources at the disposal of the local self-government ministers were too small to support a three-tier system and Taluk Boards were abolished. The Second World War prevented the ministries under the Government of India Act of 1935 from doing much in this direction. Hence, in 1947 when power was transferred to a national Government, rural self-government consisted of District Boards and village Panchayats in parts of the country. As the Congress was pledged to the revival of village Panchayats, the new State Governments began to set up Panchayats wherever they did not exist. Meanwhile, the position of the District Boards had deteriorated. The State Governments began to take away major roads, and hospitals, from the jurisdiction of the District Boards and put them under the direct jurisdiction of the State Departments concerned. The control of primary education was transferred to School Boards and in some places to the Panchayats. The District Boards had also to share the proceeds of the land revenue cess, which was their principal source of revenue, with the Panchayats.

Beginning with the first conference of Ministers of local self-government in 1948, there have been a series of enquiries, conferences and seminars relating to the reorganisation of rural self-Government. Widely differing views were expressed in these gatherings.

The idea of democratization of the local bodies and decentralisation of power in authority to them found strong support from the Mehta Committee appointed in 1956-57. This Committee found it necessary that there should not only be devolution of power and decentralisation of machinery but that such power should also be exercised directly by the people and the machinery so decentralised is controlled and directed by popular representatives of local areas. The Committee stressed that the devolution of responsibility could not be complete without transferring all the control over to necessary financial resources. It recommended the setting up of an integrated organic structure with the Panchayat at the base, the Zila Parishad at the apex and the Panchayat Samithis in between. As a consequence of this Report the two States, Rajasthan and Andhra Pradesh, have already introduced the system of democratic decentralisation and other States are engaged in adopting the system to their local conditions.

DEMOCRACY FOR RURAL INDIA

M. ANANTHASAYANAM AYYANGAR
Speaker, Lok Sabha

IT IS COMMON knowledge that democracy is the rule of the people, by the people and for the people. Rule of the people and for the people are not peculiar to democracy. In every form of Government people are ruled. Benevolent dictators and monarchs rule for the people also and even this characteristic is not peculiar to democracy. Rule by the people is therefore the only peculiar attribute of democracy. But even here there are natural limitations to the exercise of this power by the people as a whole. Minors and lunatics are naturally incompetent to take part in the administration or to set up a Government. Even in the case of adults who are competent to manage their own affairs all cannot directly participate except in the administration of City States with small populations. Direct participation of the adults in the Government was possible in City States as they could all meet from time to time and decide the issues but in huge nation-States which exist in the present day, the people cannot meet in one place nor meet often. Direct rule even by the adults, has therefore given place to the rule by their chosen representatives. Even then, all the representatives cannot discharge all the functions in the State and a few of them require special knowledge, skill and training for particular departments.

It is also common knowledge that the three organs of a Democratic State are the Legislature, the Executive and the Judiciary. The Executive and the Judiciary require special training and all the adults cannot, therefore, by themselves take part in the exercise of the functions of these two organs of the State. The scope, therefore, for the rule by the people in a democracy becomes limited to their governing the country through their chosen representatives and even that mainly for the purpose of passing laws and regulations and setting up the Government and organising Courts, in the day to day work of which again they cannot directly take part. This legislature being thus the only instrument of Government in which the people could directly participate, should therefore be broad-based as far as possible. The functions of the State are very wide and varied and the country is vast in extent and population. At each level, the representative Assembly is elected. We have therefore adopted a Federal Government and not a unitary one. Thus, all the functions of the State are evenly distributed over various representative Assemblies so that democracy can be safe-guarded. Otherwise even the limited exercise of the right by the people to organise the legislatures will lead to a dictatorship if there were only one legislature for the whole country clothed with all the powers of the State. Under a unitary Government in a big country like ours people will not generally feel the responsibility of administration and the administration will be centralised. Again, a centralised administration in a vast country will not be effective on account of its vastness and the difficulty in having personal supervision over the officers at distant places. On the other hand, representative Assemblies at various levels invested with autonomous legislative functions will make the growth of a vigorous democratic way of life possible and will constitute an effective check on the wide powers of the bureaucracy and the possible emergence of an irresponsible autocracy ending in dictatorship.

For all these reasons, a federal form of Government has been adopted in our country as against a unitary Government which prevails in the United Kingdom. But we have adopted a Parliamentary system of Government in a federal structure as opposed to a Presidential executive which prevails in America. We have thus in our country a form of Government which is a combination of the federal structure of America with the Parliamentary executive which prevails in the United

Kingdom. We have not adopted the Unitary system of the U.K. nor the Presidential system of the United States. But the federal structure that we have adopted proceeds from the Centre and stops with the States, the residuary powers being vested in the Centre. Though there is no unitary Government at the Centre, there is a unitary Government at the State level relating to the functions that have been assigned to them. Those functions directly relate to the well-being of the citizens, as against the functions reserved for the Centre which are more of a national and international character. Hence a further division of these powers of the Centre is not warranted and it may not be workable as in the case of further devolution of powers of the States to other institutions down below. Further distribution of the powers of the State may be made by creating People's Assemblies at the District, the Taluk and the Panchayat level. The Village has always been regarded as the lowest unit of administration and its affairs are to be managed by Panchayats chosen by all the adults of the village. The functions of the Panchayats would be: Health, sanitation, education, irrigation, law and order, industries, cooperation, finance, local administration etc. There may be a Taluk Council chosen directly by all the adults in the Taluk to deal with all these functions which are common to the several villages in the Taluk. Likewise, there may be a District Council having powers in similar fields but restricted to coordinating these efforts in the various Taluks and some independent functions relating to the entire District. If these powers are distributed down to the village level, the federal structure will become complete from top to the bottom. I am glad that the Mehta Committee Report had envisaged such a decentralisation of power and had recommended the formation of Village Panchayats, Panchayat Samitis in the place of Taluk Boards and Zila Parishads in the place of District Boards. These recommendations have already been implemented in Andhra Pradesh and Rajasthan.

While the election of the Panchayat at the village level is direct, for the Samitis and the Zila Parishads the election is indirect. There have always been two views regarding the mode of election. One view is that except in the case of the Village Panchayat, elections to all the other Assemblies right up to the Lok Sabha should be indirect. The other school stands for direct elections at all levels. To give the Zila Parishad a real position in the federal structure I would even suggest that there may be three Ministers called Local Ministers, consisting of the President and two other members who will constitute the Government for the district and the Collector of the district will be the chief executive officer or the Chief Secretary of that Government. These Ministers who may be called "Local Ministers" should be full-time workers entitled to a salary. This will ensure intimate contact between the representatives of the people and the people themselves and the bureaucracy will become subordinate to the democratic forces at the District level. In all these Assemblies the parliamentary procedure may be adopted. The officers at various levels working under the Collector for the District, under the B.D.O. in the Samiti and under the Sarpanch in the village will answer questions and interpellations relating to the administration at every meeting. They will have powers to make rules and bylaws consistent with the laws framed by the Government at the Centre and in the States, and suited to their local conditions. These new institutions and the problems they will throw up will infuse a democratic spirit in the minds of the people and enable them to adopt a democratic way of life. In a democracy it is the force of law that has to prevail over the law of force. Instead of deciding issues by force wherever there are differences, in a democracy the differences are settled by discussion, deliberation and persuasion and decision is arrived at in the final stage. It is necessary that these decisions should be honoured and respected and until they are changed they must be allowed to be

implemented without obstruction.

I have referred so far to the decentralisation of powers and how the federal structure can be carried down to the village level instead of stopping at the State because I found during my recent tours that great enthusiasm has been generated in the masses and the elections are keenly contested for the Panchayats, Samitis and Parties and factions are springing up in various places. I feel that at these levels sharp political differences are not to be allowed to play. The services or the functions that are entrusted to these Assemblies are of a nation-building character and hence politics need not be imported into them. However, by a mere appeal to reason the factions may not be avoided. My suggestion, therefore, is that instead of having only one Panchayat for a village there may be several Panchayats, each autonomous in its own affairs. All the Presidents and Secretaries of the various Panchayats may form into a federation for consultative purposes. I am aware that under the existing constitution in every Panchayat a number of Functional Committees could be organised but I have seen that the Chairman of these committees are not as much respected as the Chairman of the Panchayat and they do not carry the same prestige. Hence separate functional Panchayats may be constituted in every village autonomous in their own spheres. These several Panchayats will give an opportunity to several people for serving as Presidents and in a village all the enthusiastic men would desire to actively work for the village. Members of any particular Panchayat may after their term is over choose to serve on other panchayats and in a period of ten years, they would have knowledge and experience of the working of all the panchayats.

The village administration may accordingly be entrusted to five or six Functional Panchayats elected for a couple of years each on adult-franchise from among the villagers. No one should be a member of more than one Panchayat at a time. Each Panchayat should consist of 5 to 7 members who will be chosen by all the adults in the village. The first may be the Local Administration Panchayat whose members may be chosen from adults between the ages of 25 and 40. The functions of this Panchayat will be those normally entrusted to a municipality or a local board, namely, village sanitation, roads, lighting, water supply, drainage, manure pits, health and civic amenities.

The second Panchayat will be the Educational and Cultural Panchayat. Educational qualifications for membership may be imposed. They may vary from village to village according to the availability of qualified men. These Panchayats will manage the village school, organise a reading room and library, sports, games and lectures, provide for adult and visual education and arrange cinemas and cultural shows, Bhajans, and look after places of worship etc.

The third Panchayat will be a Judicial or Nyaya Panchayat consisting of persons between the ages of 40 to 60 who for a period of 10 years will act as the Jurors in respect of litigation in their own village. The court may be presided over by an itinerant Munsif Magistrate, and there may be one Munsif Magistrate for each Samiti or groups of Samitis. There should be no appeal against the unanimous decision of the panel and if there is a difference the Magistrate's decision shall prevail but the same shall be subject to an appeal to a First Class Munsif Magistrate having jurisdiction.

The fourth Panchayat may be a Farmers' Panchayat. In the Police State which existed during the British rule there was no agency in a village to insist upon every inch of land being cultivated and if necessary to provide facilities therefor to the villagers. The whole country had been organised as a Police State with a Governor General assisted by a Commander-in-Chief at the Centre, with a Governor and a Military Secretary in the Provinces, with the Collector and Superintendent of Police in the District and a village

Karnam and a watchman in the village. Their functions were purely collection of taxes and maintenance of law and order. We have now given to ourselves a Welfare State the object of which is primarily to increase the prosperity of the villagers. Collection of taxes is only incidental to administration. Law and order do not loom so large in a democratic State as the people and the rulers live under a rule of law and not under the rule of force. The Farmers' Panchayats may consist of progressive farmers elected by the farmers in the village. It shall be the duty of the Farmers' Panchayats to collect the land revenue and make the village self-sufficient in food. They must also be put in charge of the village waste lands, cattle stands and grazing grounds and tanks, village forests and so on. They will have powers to enforce labour in maintaining common irrigation sources. They may be entrusted with all the work of distribution of seeds, fertilisers etc. These Panchayats may serve as Service Cooperatives for the village. They may also be entrusted with the work of settling disputes relating to water and the employment of labour in the village. Regarding finances for the village administration, I would advise that the entire land revenue may be progressively given away to them. Today, unlike in the olden times when land revenue constituted the major source of Government income, sales tax is more or less the main source of income now to the States. Today, our villagers have a feeling that all their revenue is taken away and nothing is left with them. A feeling must be created in their minds that all the land revenue is their own and for common purposes they must contribute therefor.

There shall also be a Police Panchayat consisting of young men between the ages of 19 and 25. They may be given proper police drill and training and entrusted with the work of keeping order and preventing crime in the village. They may be given preference in the matter of recruitment to the regular Constabulary.

There must also be a Multi-purpose Cooperative Society for a group of villages which will act both as the financing and marketing Corporation for agricultural and industrial activities and products respectively.

This kind of decentralisation will contribute to the spread of the democratic way of life and enable the villagers and members of the Panchayat and Boards to feel that the administration is theirs. Today the villagers seem to feel that they are not limbs of the administration and whatever their ills, even those arising out of their own acts, are attributed to the centralised administration either at Delhi or at the State capitals.

In the matter of taxation the villagers must be made to feel that the income of the villages is primarily intended for their benefit and they must make a contribution for running the administration relating to matters of common interest. The idea that they must get all assistance from the Central or State Governments must disappear. There is a claim in every village for some kind of assistance as if villagers by themselves have no responsibility to order their own economic life and contribute to the economic growth. Repairing the village roads, planting of trees, maintenance of reading room and library must be primarily their concern. Assistance in very needy cases may come from the Central or State Government.

The heads of these Functional Panchayats in each village will constitute a federation for the purpose of coordinating village activities with presidentship thereof going by rotation. Wherever necessary an Artisan Panchayat may also be constituted. This, I think, is the Gram Raj visualised by Gandhiji where the villages will become little Republics and take care of themselves and the masses will not be materially affected by any change of Government at the Centre or the State.

THE STORY OF "BACHAT GRAM"

THE SMALL SAVINGS movement is permeating the villages, slowly but surely. Samargopal Pur, a tiny village seven miles from Rohtak in Punjab, is the latest to make history. Every family in this farming community is saving for the National Plan.

This village of 415 families with 2,668 people in all, has achieved an unprecedented success in popularising the Small Savings Scheme. There is an inspiring story behind the success of the National Savings Campaign in Samargopal Pur, where 397 families have invested Rs. 94,000 in National Plan Savings Certificates. Well-meritedly, the village has earned the distinction of being known as "Bachat gram".

This fairly prosperous village, with 4,558 acres of cultivable land—1,945 acres canal-irrigated—grows mainly wheat and gram and other *kharif* crops and also produces sugarcane. American variety of cotton, jowar, bajra and maize. The saving capacity of the people has increased as a result of improved standards of living. This has been achieved by better irrigation facilities and the development work carried out in the area. The inhabitants, many of them Rajputs, are hardy people. They own two tractors, two model farms, 85 manure pits and six irrigation wells. Improved methods of farming are employed in this village.

Samargopal Pur was selected some time ago for special pilot work in the Small Savings Scheme. Initial efforts to bring the people together at a meeting failed. It became a problem to collect a crowd. At last, the local Social Education Organiser decided to make one more try. Instead of calling a meeting himself or through local influence, he decided to go to a meeting convened for settling local problems.

Such an occasion soon arrived when the village Panchayat met to settle a quarrel over a bull. The Social Education Organiser took advantage of the opportunity to speak to the people about the National Savings movement. His appeal went home. Some of the villagers came forward with constructive suggestions. They agreed to organise *prabhat pheris* and make door to door approaches. Small parties would visit each family and appeal for maximum investment.

The campaign, as planned, was launched. Every individual whether in the home, at farm, at the raliway station or the bus stand, was contacted. School children—both boys and girls—evinced great enthusiasm. They went round before dawn shouting savings slogans. In homes, children got their parents to buy National Plan Certificates in their names. There was keen rivalry among them and even tiny tots found themselves small savers.

A similar story comes from a little village in Gujerat. In Kumbalmer, 15 miles from Palanpur in Banaskantha district, 1,015 people belonging to 207 families contributed Rs. 1,570 to the Small Savings movement. The investment is small, but the people have caught the idea which is spreading.

This village is located in an arid tract with no irrigation facilities. Out of a total area of 1,508 acres owned by the community, about 1,275 acres are under seasonal cultivation. The village has 58 wells for irrigation facilities during the dry season. There is a primary school but the nearest secondary school is three miles away. The bullock-cart is the only means of communication to the nearest bus stand.

In spite of these meagre resources, the people have turned Kumbalmer into a "Bachat gram" where every family saves regularly for the National Plan.

Samargopal Pur and Kumbalmer have joined other villages which have given an inspiring lead to those that have yet to become "Bachat grams". There are already many such "Bachat grams" in different parts of India. Like "Bachat grams", there are "Bachat schools" and "Bachat offices" which are also coming up as a result of the sustained savings campaign in various States.

With the growing capacity to save, the savings movement is gaining momentum. In the first eight months of the current financial year, the total net collections have exceeded Rs. 36½ crores. The net collections for the corresponding period last year were Rs. 36.21 crores.

ANAB-E-SHAHI—THE ROYAL GRAPE

B.M. PANSARE

ANAB-E-SHAHI is the Arabic name for the famous grapes grown in Hyderabad at present. This variety comes from an Arab Country—Syria. It has been adjudged as the best table variety at present in India. The berries are big in size and attractive in colour. It is also a sweet variety. Naturally it is attracting attention all over India.

A New Cash Crop

In Hyderabad market it is generally sold in season at the rate of Rs. 1.50 nP to Rs. 2.00 per lb. If properly cultivated and looked after it gives an average yield of 20,000 lbs. per acre.

During the last 6 or 7 years, small plantations have sprung up round about Hyderabad and their performances have been strikingly promising. The plantation of Dr. Ramkoteshwar Rao located at Toli Chowki, few miles from Orientation Training Centre, Himayatsagar has, during the last three years already made history. Measuring less than an acre, the plantation has yielded an income of Rs. 25,000 annually.

Dr. Ramkoteshwar Rao is not an isolated example of business success in grape production. There are many others in the line—making huge profits. Small holdings which for normal cultivation purposes would have been considered uneconomic, thus become highly remunerative.

Subsidiary Occupation

It is a "par excellence" subsidiary occupation. One or two vines can be easily planted in the vacant place in front, back, or central yard of a house and the vine can be trained on a bower even 30 to 40 feet high from the ground level where necessary.

The variety is a very vigorous grower and adapts itself to many systems of training. In places where it is not possible to accommodate a vine in the back yard of a house, it is possible to train the vine on a single stem to heights varying from 30 to 40 feet and made to spread on a bower or the roof of the house and get them to yield abundantly.

A single vine is capable of spreading over an area of about 400 to 500 sq. feet in about 3 years and is capable of yielding about a bunch of an average weight of 1 to 1½ lbs. per 2 sq. feet of area. In Hyderabad City there are more than five thousand houses where this variety is planted in the compound, back yard or central yard of the house and the vines yield so much as to pay for the annual rent of the house (if the planter is a tenant) and give him sufficient grapes for his family to consume.

Rich Fruits

The average weight of a bunch under good cultivation is well over a pound. The maximum weight recorded of a single berry over 1 tola. Once the simple technique of pruning is understood and the means to control diseases and pests are known, grape growing is an easy affair and lends itself both to small and large scale business.

Present experience shows that it does well only when tamed on a Mandwa (Bower). The best time for planting is January and the best soil being well drained red chalka or medium black with well drained sub-soil.

Cultivation Techniques

The grape thrives best in well drained, loose friable soil. It also thrives well in alluvial soils, *i.e.*, soils on the banks of rivers and streams. It has done well in Chalka derived from (i) Granite, (*ii*) Medium black soil of the Deccan derived from the trap rock and Red Laterite soils. Heavy soils with high retentivity of moisture are unsuitable for grape cultivation.

Regions of heavy rainfall are not suited for grape cultivation. Warm and dry winds during day time are required when the fruit ripens. The western half of the Telangana and Rayalseema, Ramnad of Madras State, Bangalore, Belgaum and Bijapur and part of Bellary, Kolhapur Sangali, Sholapur, Ahmadnagar, Osmanabad, Bhir, Aurangabad, Poona, part of Gujerat and Saurashtra, Chanda, part of districts of Berar where the soil is light, enjoys this sort of climate and is therefore

well suited for growing grapes.

Propagation is done by means of cuttings. Cuttings from October pruning about 8″ to 10″ length with 3 to 4 eye buds are planted in a bed with one node below the soil and two or three nods above ground. By January they are ready for transplanting. Best season for transplanting is from January to March. If the cuttings are planted in the rainy season there is always a possibility of the tender plants being attacked by pests and diseases which retards its growth.

Pits 4×4 are dug at 24′ in rows and 18′ in the same row, and rooted cuttings planted in (winter) January.

The best mode of trailing is on a bower or Mandwa about 8 feet high. In a house the vine can be trained up to a height of 30 to 40 ft., from ground level where space is available for trailing the same on the roof. For instance in an Indian house if the space for bower is available after the first storey the vine can be taken to that height and trailed on a bower after the first storey.

April pruning is intended to promote vegetative growth and to induce fruiting during the fruiting season of October to March. No pruning should be done till the main trunk attains the size of wrist. With proper care this size can be attained in about two to three years from planting. October pruning is very important from the point of view of getting a good and sweet crop. October pruning, root exposure and manuring should be done. Roots should be exposed for a week and no water should be given during this period. Root exposure should be done over a radius of four to five feet around the trunk, excluding 6″ maund around the main stem. The soil is dug to a depth of 1′ to 1½′ and removed. Thus the roots get exposed. Later on the roots are covered with:

(1) Farm yard manure . .	. .	15 baskets.	per plant
(2) Fish meal . .	. .	3 to 6 lbs.	
(3) Castor cake . .	. .	2 to 4 lbs.	
(4) Superphosphate or bone meal		8 to 12 lbs.	
(5) Amonium sulphate . .	. .	1½ to 1 lb.	
(6) Potassium sulphate . .	. .	1 lb.	

This manure mixture is thoroughly mixed with ½ to ¾ cart load of fresh soil and spread evenly over the exposed root region. Copious irrigation is given. At the same time pruning is done.

Grape vines require frequent irrigation. In winter season the period between two irrigation will be from 3 to 6 days according to nature of soil. In Monsoon the period will be large while as in summer the period will be shorter. After April prunning, the irrigation should be given immediately and in sufficient quantity.

Care and Maintenance

Grape vine is one of the most intensively cultivated fruit crops and responds to careful maintenance. The basins around the vines should be regularly weeded and mulched after every irrigation. If the growth of the vine is not satisfactory, 2–3 teaspoonful of Ammonium Sulphate dissolved in 2–3 gallons of water can be applied. All dried, diseased and dead leaves should be removed periodically.

INDIAN TOBACCO

Tobacco plays an important role in India's economy. As a cash crop, it brings to the cultivators an annual income of about Rs. 40 crores and contributes over Rs. 50 crores annually by way of excise duty to the national exchequer.

India is the third largest tobacco producing country in the world after USA and China. According to the all-India third estimate for 1958-59, the acreage under tobacco was 8,77,000.

India broke all its previous records with her export of about 106 million lbs. of tobacco in 1958, valued at about Rs. 16 crores.

Tobacco production provides livelihood to lakhs of persons working in its various segments. The important tobacco species which are cultivated in India are *Nictiana Tabacum* and *Nicotiana Rustica*. The first one, better known as Virginia type, has earned a name in the world

(*Continued on page* 16)

DOLLS AND TOYS

INDIAN LIFE and culture are very well reflected in Indian toys which range from numerous types of dolls, mythological characters, small animals and birds to various categories of fruits. They also portray in a vivid manner the customs, practices, dresses and ornaments of people of different regions. Among States known for their typically oriental toys are Uttar Pradesh, West Bengal, Orissa, Bombay, Madras and Mysore. Among centres which have earned names in the production of special types of toys, are: Lucknow, Mathura, Agra, Varanasi, Murshidabad, Krishnanagar, Calcutta, Berhampur, Kondapalli, Tiruchirapalli, Travancore, Nasik, Gokak and Savantwadi.

The pattern of toys generally depends on the raw materials available in the area. While in the northern zone comprising Uttar Pradesh and West Bengal toys are moulded from soft clay, they are made of papier-machie and cloth in Rajasthan and of wood and soft stone in Madhya Pradesh. In the eastern belt extending to the extreme south, light yellow or red wood is usually used for the purpose. Lately rubber and plastics have also come to be used for the manufacture of toys.

Terra Cotta figures and toys, which are prevalent all over India, have since time immemorial been a subsidiary occupation of the Indian potter. The coastal districts of south India are famous for toy birds and boats made of shell, while Hyderabad has achieved distinction in production of small tea sets and kitchen utensils made out of areca nuts.

Wooden models of Indian fruits and vegetables, with close resemblance to the natural, are a speciality of Gokak and Savantwadi. Lucknow also is an important centre for toy fruits, vegetables, birds and miniature human figures made mostly of clay. Kitchen and household utensils, popular with little girls, are best made in Mysore and Madras. Krishnanagar in West Bengal, a great toy producing centre, manufactures a large variety of toys including human figures playing musical instruments, dolls, animals etc. Manipur is well-known for its toy dancers dressed in red and green with feathers as ornaments. The toys of Kondapalli near Vijayawada, excel most of the other Indian toys from the point of view of workmanship and artistry. They are made of wood and cover a variety of subjects such as artisans, toddy-tappers and elephants with *howdahs.*

National places of pilgrimage and fairs on festive occasions give a great helping hand in boosting the sale of toys. The temple squares and railway stations in national pilgrim centres like Allahabad, Varanasi, Gaya, Puri, Mathura, Tirupatti, Madurai, Rameshwaram and Nasik are full of large stocks of such toys and serve as major marketing centres.

Besides the small-scale industries in villages and small towns which are responsible for the production of the bulk of toys, there are also a number of institutions and individuals who make toys for the city bazars. Realising the importance of this industry, the All India Handicrafts Board is giving special attention to this trade. The use of toys as an easier method for imparting education to children has also proved an encouragement to it. A 'Pilot Production Centre for Educational Wooden Toys' has been established in Bombay by the All India Handicrafts Board. The Centre which has got a research section evolves new models and patterns of design which are distributed to different toy producing centres in India. The doll making unit of this centre produces various types of dolls which are considered the best in India. The All India Handicrafts Board propose to turn this centre into a 'National Craft Institute for Toys' in the near future.

Indian toys, particularly those with oriental designs, are also securing slowly an export market. Though the plastic and rubber toys have a better export market because of their low costs, efforts are being made to popularise wooden and metal toys in foreign countries.

SCIENCE NEWS-LETTER

Parboiled Rice

A NEW METHOD of parboiling of rice which eliminates the bad smell in parboiled rice and reduces the soaking time taken in the method obtaining at present has been developed at the Central Food Technological Research Institute, Mysore. The Department of Applied Sciences of the Jadavpur University, West Bengal, has also improved upon the existing method of parboiling more or less on the same principles but with some differences in the equipment used. In their case the process is known as the Bose and Mazumdar method.

Parboiling of paddy is a traditional practice in the rice-growing States which helps in dehusking of paddy and makes the grain harder. The yield of rice grain is thus increased by 5 to 10 per cent, mainly due to saving on breakage during polishing which would otherwise occur if the grain was milled in the raw condition. The storage and cooking qualities of rice are also improved by parboiling.

Parboiled rice is noted for its nutritional properties because it has more vitamins and minerals than raw rice in the polished state. These nutrients are also not so easily leached out by water during washing of rice prior to cooking.

However, under the existing method parboiled rice-gives an unpleasant smell which though mild in the uncooked state becomes very pronounced after cooking. Besides, this rice has an unattractive colour.

Under the improved method paddy is soaked in hot water (70° to 75° C) for three to four hours instead of in cold water (25° to 30° C) for three to four days as done under the traditional method. Also, instead of drying in the sun, the soaked paddy is passed through artificial drying machines. Besides eliminating the bad odour and decolorisation, the improved method has also some commercial advantages like quicker turnover of capital, operation under hygienic conditions etc. An up-to-date parboiling mill incorporating this principle is being constructed in Mysore State.

The parboiling process hardens the rice grain and reduces its tendency to give a thick gruel which is particularly noticeable during the cooking of new rice and is responsible for undesirable cooking properties. A mild form of steam heat treatment has been found to be capable of improving the cooking quality of new rice. As the steaming treatment is mild and for a short time, the cured rice is opaque and looks like old raw rice itself. The cured 'new' rice cooks into separate individual grains and swells also to the same extent as old rice.

Rice Bran Oil

THE CENTRAL Food Technological Research Institute has developed a process for the recovery of high-grade edible oil from rice bran obtained from mills and hand-pounding.

Bran forms about 6 to 13 per cent of rice with an oil content of 10 to 22 per cent, and the rice bran oil is recovered by solvent extraction using industrial alcohol, a by-product of the Indian sugar industry. Its cost of production is estimated at 50 nP. per lb.

Rice oil is rich in vitamins and is suitable both as cooking and salad oil. The oil can also be hydrogenated to produce vanaspati.

Mixed Cropping

RECENT experiments carried out in Punjab, Andhra Pradesh and Mysore have shown that mixed cropping can be made a paying proposition.

Mixed cropping proved advantageous in Punjab, where cotton and groundnut were commonly grown mixed. Last year the cotton crop failed due to heavy rains in September and October. But the heavy losses farmers would have incurred as a result of this misfortune were offset by a good harvest of the grountnut crop grown mixed with it.

A mixed crop of cotton with chillies and groundnut brought more profit than a pure crop alone in the Guntur District of Andhra Pradesh. The extent of the additional profit from an acre

of the mixed crop ranged from Rs. 21 to Rs. 93.

Similarly, a Laxmi cotton crop grown mixed in Dharwar (Mysore) fetched more profits without any bad effects on the quality of the cotton produced than a pure Laxmi crop.

Domestic Fuel

MORE THAN four-fifth of the population in India is rural and the people living in villages depend upon firewood, cattle dung and agricultural and other plant wastes for fuel. These materials are generally obtained free of cost from all possible local sources according to the needs of the user.

The total domestic consumption of fuels in India is estimated at 82.24 million tons in air-dry firewood equivalent, about 78 per cent of which is consumed in rural areas and 22 per cent in the urban areas. Of the total quantity of fuel consumed, cattle dung contributes 49.6 per cent, firewood and charcoal 38.7 per cent, plant waste 8.5 per cent, soft coke 2.7 per cent, kerosene 0.4 per cent and electricity 0.1 per cent.

The total quantity of cattle dung (green) produced in the country is 1,036 million tons and the quantity available for use is 696 million tons of which 300 million tons are dried and burnt as fuel.

The choice of the domestic fuels in the villages is governed mainly by two considerations. The first is the traditional disinclination of a villager to buy fuel. Secondly, the transport of fuels in rural areas is difficult due to poorly developed roads and other transport facilities and the little demand at any one place.

Researches at the Regional Research Laboratory, Hyderabad, and the Central Fuel Research Institute, Jealgora, have established the commercial feasibility of producing smokeless fuel from coals at economic prices.

Domestic coke is being produced at Hyderabad in a 25 tons/day pilot plant and it has found ready consumer acceptance. The plant in operation at Jealgora yields domestic coke from all types of coal, coking and non-coking. These are important developments. If commercial production of soft coke and smokeless fuel is established and sustained efforts are made to popularise their use, the consumption of firewood and cattle dung can be greatly reduced. Serious consideration is being given to production of domestic coke in the country in the Third Five Year Plan.

All about Fish

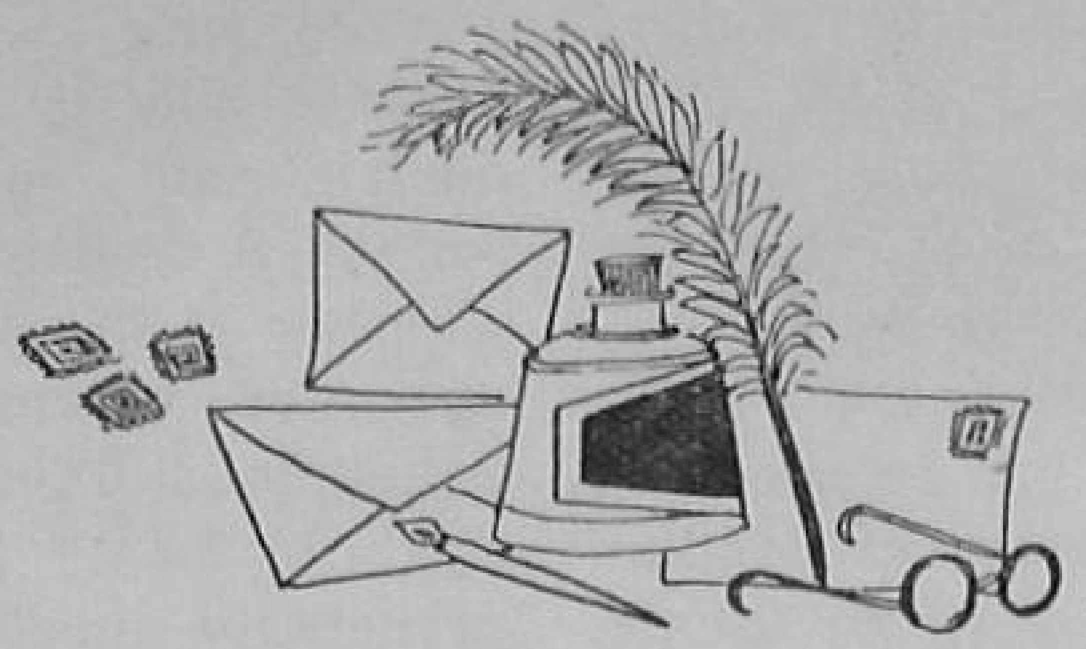
PRODUCING OVER a million tons of fish per year, India ranks eighth among the fishing nations of the world. The potentialities of this industry can be estimated from the fact that, apart from providing employment to about 4.21 lakh persons and contributing about Rs. 28 crores to the national exchequer, it also earns a sizeable amount of foreign exchange for the country.

Along the extensive coastline over 73,000 fishing crafts, engaging nearly a million fishermen, ply day and night. The output for inland fishing is about one-third of the country's total production.

Considering that India's coastline is about 3,535 miles and that the Indo-Gangetic Plain and the Peninsular India are fed by innumerable rivers apart from the large number of tanks, ponds and other impounded waters, there is ample scope for stepping up fish output. Though it received some fillip in connection with the Grow More Food Campaign in 1944, the development of fisheries on a scientific basis was started only after independence.

Some of the more important steps taken in this direction were the setting up of the Central Marine Fisheries Research Station at Mandapam, the Central Inland Fisheries Research Station at Calcutta and the Central Deep-Sea Fishing Station, Bombay, in 1947.

To examine the needs of fisheries programmes for trained personnel and the facilities required for their training, the Government of India set up a Committee in 1958. One of the suggestions of the Committee is setting up of a Fisheries Training Institute at Cochin and a separate subcentre in the Kausalya-Ganga area of Bhubaneswar (Orissa). The Committee has also laid down a pattern for an organisational set up of the departments of fisheries.



OUR POST BOX

(Readers' questions are answered in these columns by **VIDUR***)*

Question : *What is wrong with our agricultural cooperatives?*

Answer : The declared policy of the Government is that every village should have a cooperative society and that nearly every agriculturist should be a member of that society so that his needs for credit and other essential supplies such as improved seeds, improved implements and fertilisers are met by the society which in addition would also help him to market his produce as advantageously as possible. Some progress has been made, and the loans disbursed by the Reserve Bank have increased from a few lakhs in 1947-48 to nearly Rs. 70 crores in 1958-59. However, a lot remains to be done since the total annual requirements for agricultural loans has been estimated at Rs. 400 crores. Another astonishing thing is that even though the need for agricultural loans is so great, yet about Rs. 12 crores remained unspent out of the sanctioned amount of loans for 1958-59. The reasons for this slow pace of utilisation of the sanctioned loans are reported to be due to the weak cooperative credit structure. The ability of the cooperative credit movement to measure up to the task legitimately expected of it depends to a large extent on the soundness and efficiency of the primary cooperative credit societies that lend directly to the agriculturists. While there has been a large increase in the coverage of agricultural cooperatives the number rising from 85,000 in 1947-48 to 1,68,000 in 1957-58 the percentage of societies which could be regarded as well run or reasonably well run has gone down appreciably. One hears of thousands of societies having been registered. Unless steps are taken to ensure that these societies are well managed and efficiently run, the time and effort spent in organising them will have been largely wasted. And there is bound to remain a big gap between what is planned and what is achieved.

It has not been possible so far to link credit with marketing. The absence of storage godowns and warehouses at all levels including the village, the Mandi, the State and the Centre and an efficient organization trained in warehousing has held up the progress of the scheme. The hurdles shall have to be overcome if success is desired. The simplification and streamlining of cooperative rules so as to make loans available for creditworthy purposes rather than creditworthy persons is still awaiting the V. L. Mehta Committee's Report. Even then its success is largely dependent on credit having been first linked with marketing.

Question : *Will you classify a cooperative as part of the Private Sector or the Public Sector?*

Answer : It is very difficult to attempt any such classification for labels often fail to clearly bring out all that they stand for and therefore they tend to be misleading. It is not possible to draw a fine line of distinction even between the terms "Private Sector" and "Public Sector". In the former sector, as distinguished from the latter the primary motive is individual profit rather than public good, yet it is intellectually possible to conceive of a Private Sector in which the entrepreneur regards himself as a trustee and carries on all his activities for the good of the society.

A cooperative enjoys democratic freedom within its own limits and is, therefore, nearer to the Private Sector as opposed to the Public Sector where the State is the central guiding force. It is akin to public sector to the extent that the determining motive is the good of the society and not the individual's profit.

The cooperative ideal is not opposed to "entrepreneurship" as a matter of principle or ideology. It may and does co-exist with the latter. It seeks to replace it only where it is not in the best interests of the society.

Question : *It has been suggested that in order to help the Industrial Cooperatives to survive against the open competition in the market, they should be given monopoly of production in certain spheres. Do you agree with this ?*

Answer : The small scale and cottage industries are indeed, having a very hard time as they have to face an unequal competition with the centralised large scale production. The hope of their survival lies in organising them on a cooperative basis. The cooperative way of working provides the best solution to many of the difficulties faced by them, such as lack of finance, procurement of equipment and imported machinery, purchase of raw material and marketing of finished products. The Japanese team of experts who toured the country some time back, as well as the Working Group set up by the Government to study the Industrial Cooperatives have both laid stress on the fact that even though production is carried on privately, there should be a well-organised cooperative management to ensure supply of raw material, storage facilities, standardisation, quality marking and marketing. Another important recommendation is that an integrated programme of small scale and large scale industries should be evolved so that instead of the two engaging themselves in cut-throat competition, they are complementary to each other. If this happens, there will be no necessity for reserving a particular sphere of production for cooperatives alone. This is possible, and is being worked with advantage for decades now in a highly industrialised country like Japan. A system of monopoly whether in the private or co-operative sector is bad in principle and in practice, it tends to dwarf progress and perpetuate inefficiency and low production.

INDIAN TOBACCO

(Continued from page 11)

market for its golden colour and neutral flavour. This species is used in blends with other tobaccos in the manufacture of cigarettes, cigars, cheroots and bidis. *Nicotiana Rustica* is used in *hookah,* and also for chewing and snuff purposes.

Andhra Pradesh is the most important tobacco producing centre. It produces about 33 per cent of the country's Virginia cigarette tobacco. After Andhra Pradesh come Bombay, Madras and Uttar Pradesh. Realising the necessity for coordinated and systematic effort to improve and develop tobacco crop, the Government of India constituted an autonomous body in 1945 known as the Indian Central Tobacco Committee.

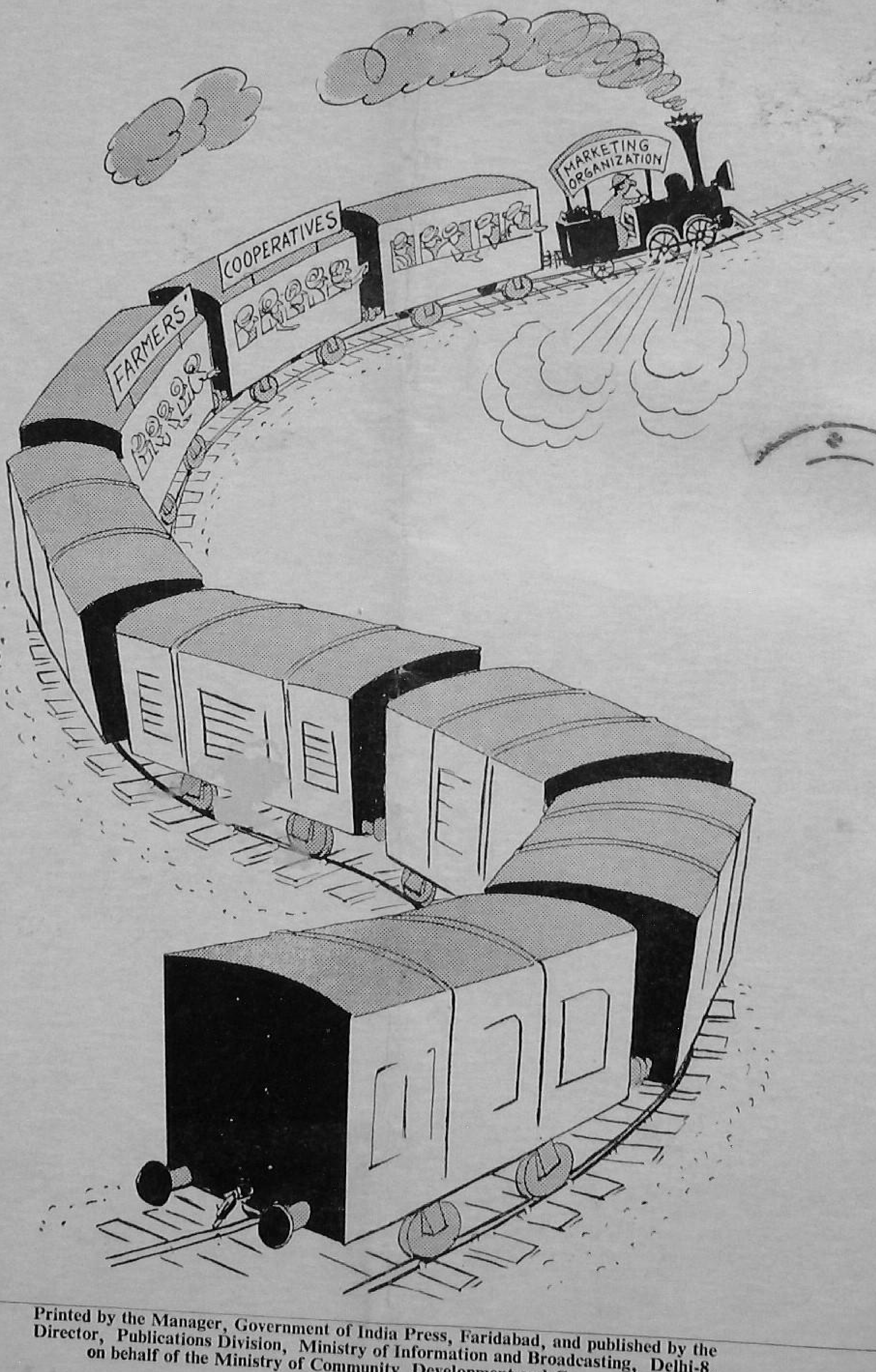
The Committee established a Central Tobacco Research Institute at Rajahmundry (Andhra Pradesh) for carrying out investigations of a fundamental nature. Later, four other research stations were established : (1) Cigarette Tobacco Research Sub-station, Guntur; (2) Cigar and Cheroot Tobacco Research Station, Vedasandur (Madras); (3) Hookah and Chewing Tobacco Research Station, Pusa (Bihar), and (4) Wrapper and Hookah Tobacco Research Station, Dinhata (West Bengal). Under the Second Five Year Plan, another Tobacco Research Station was established at Hunsur (Mysore).

Other schemes also working under the technical control of the Central Tobacco Research Institute are : Bidi Tobacco Research Sub-station, Nipani (Bombay), Bidi Tobacco Research Scheme, Anand (Bombay) and Hookah Tobacco Research Sub-station, Ferozepur (Punjab).

Gram Lakshmi

Regd. No. D—877

Up-hill Task



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